

Operation

Square Root Routine

$$r = \sqrt{b}$$

SQR

Use

a) Calling Linkage

L :  $\begin{bmatrix} 001 & 1 & [L+2] & [012] & [35F] \end{bmatrix}$   
 L + 1:  $\begin{bmatrix} \text{---} & 5 & [ \text{---} ] & [ \text{---} ] & [SQR:1] \end{bmatrix}$   
 L + 2:  $\begin{bmatrix} \text{---} & 0 & ] b [ & ] r [ & \beta \end{bmatrix}$

b) Adaptation Link Word

L + 2:  $\begin{bmatrix} 012 \\ 11 \end{bmatrix} \text{LWL} \begin{bmatrix} 011 \\ 11 \end{bmatrix} \beta$

c) Storage

j =  $\begin{bmatrix} 012 \\ 11 \end{bmatrix} 18$  words  
 k =  $\begin{bmatrix} 11 \\ 11 \end{bmatrix} 17$  orders  
 0 constants  
 3 opstos:  $\begin{bmatrix} 35d \\ 35d \end{bmatrix}$  to  $\begin{bmatrix} 35f \\ 35f \end{bmatrix}$

Requirements and Performance

- Method of operation Floating point, - successive iterations.
- Additional routines required None
- Range and form of variable b must be real and normalized, When  $b < 0$ ,  $r = \sqrt{|b|}$  is furnished with a negative sign.
- Accuracy  $1 \times 2^{-40}$  of significant number.
- Performance time About 1.1 sec.